Standard Operating Procedures for Latent Print Processing with Small Particle Reagent

1 Scope

Small Particle Reagent, also known commercially as WetPrint®, is an aqueous solution used by latent print personnel to develop sebaceous latent prints on submerged firearms. Small Particle Reagent is commercially available in both white or black (dark) formulations.

2 Equipment/Materials/Reagents

Spray bottles or glass trays

Water

Small Particle Reagent (White or Black/Dark)

3 Standards and Controls

Not applicable.

4 Sampling or Sample Selection

Not applicable.

5 Procedures

5.1 Working Solution Preparation

a) Follow manufacturer's instructions.

Note: Container should be frequently shaken during processing to re-suspend solids.

5.2 Application

a) Remove firearm from water. Do not dry the specimen.

b) Use only premade solutions of Small Particle Reagent.

c) Use the Small Particle Reagent solution according to the manufacturer's instructions.

d) A copy of the instructions, to include the manufacturer and Lot number (if available), will be retained in the case record.

e) Capture developed latent prints as appropriate. For digital capture and photography, see FBI Latent Print Units Processing Manual Preamble.

f) Replace the firearm in water upon completion of processing.

Note: If development is not sufficient, the Small Particle Reagent solution can be reapplied to the specimen.

5.3 Storage

Small Particle Reagent solutions can be stored in original containers.

5.4 Shelf Life

Small Particle Reagent solutions have an indefinite shelf life provided the reagent checks are satisfactory.

Note: If the working solution is separated, shake vigorously. If the solution does not return to suspension, discard the solution.

5.5 Reagent Checks

See FBI Latent Print Units Processing Manual, Preamble.

6 Calculations

Not applicable.

7 Measurement Uncertainty

Not applicable.

8 Limitations

Developed prints will be photographed immediately as drying of the specimen may cause the prints to fade and rust formation can be detrimental to firearms examinations.

9 Safety

See FBI Laboratory Safety Manual for appropriate information.

10 References

FBI Laboratory Safety Manual, Federal Bureau of Investigation, Laboratory Division. Latest Revision.

FBI Latent Print Units Processing Manual, Preamble, Federal Bureau of Investigation, Laboratory Division. Latest Revision.

Book, M. K. and Tullbane, J. "Detection of Latent Print on Handguns After Submersion in Water." *Evidence Technology Magazine.* September-October 2011: 22-25, 29.

Lightning Powder Company. Technical Note No 1-2757. Small Particle Reagent. 4/2000.

Lynn Peavey Company. WetPrint®. 1/4/2005.

Onstwedder, J., III and Gamboe, T.E., Jr. "Small Particle Reagent: Developing Latent Prints on Water-Soaked Firearms and Effect on Firearms Analysis." *JFI.* 34(2):321-327.

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1	01/13/14	Section 6.5, removed section duplicated in Preamble and replaced with reference. Section 10, added last line. Section 11, modified last entry to conform with current updated document.
2	10/02/17	Specific section numbers referenced in Preamble removed throughout document. Section 1, latent print personnel added. Section 4 removed and remaining renumbered. Titles for Section 4 and Section 7 modified. Section 9, generalized. Updated for Biometrics Analysis Unit. References Updated. Section 5.2 e, document added. Abbreviations addressed.

Approval

Redacted - Signatures on File

Latent Print Operations Unit Chief — Date: 10/02/2017

Latent Print Support Unit Chief / Technical Leader — Date: 10/02/2017

Biometrics Analysis Unit Chief — Date: 10/02/2017

QA Approval

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